



UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Gopal B. Avinash

Serial No.: 10/723,189

Filed: November 26, 2003

For: METHOD AND APPARATUS
FOR SEGMENTATION-BASED
IMAGE OPERATIONS

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Group Art Unit: 2624

Confirmation No.: 9027

Examiner: Motsinger, Sean T.

Atty. Docket: 136854-1 GS/YOD
GEMS:0259

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Eddie Lou Robinson
Eddie Lou Robinson

PRE-APPEAL BRIEF REQUEST FOR REVIEW

In light of the following remarks, Appellants respectfully request review of the final rejection in the above-referenced application. No amendments are being filed with this Request. This Request is being filed with a Notice of Appeal. In the Final Office Action, the Examiner rejected claims 1-7, 9-15 and 17-29 under 35 U.S.C. §102(b). Claims 1-7, 9-15, and 17-29 remain pending in the present application. Appellants respectfully request reconsideration of the pending claims in view of the following remarks

Rejections Under 35 U.S.C. §102

The Examiner rejected claims 1-7, 9-15, and 17-29 under 35 U.S.C. §102(b) as being anticipated by Fan et al., U.S. Publication No. 2002/0093686 (hereinafter "Fan").

Legal Precedent

During patent examination, the interpretation of the pending claims must be consistent with the interpretation that one of ordinary skill in the art would reach. *See In re Cortright*, 165 F.3d 1353, 1359, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); M.P.E.P. §2111. “The inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation.” *See Collegenet, Inc. v. ApplyYourself, Inc.*, 418 F.3d 1225, 75 U.S.P.Q.2d 1733, 1738 (Fed. Cir. 2005) (quoting *Phillips v. AWH Corp.*, 75 U.S.P.Q.2d 1321, 1326). The pending claims must be given an interpretation that is reasonable and consistent with the specification. *See In re Prater*, 415 F.2d 1393, 1404-05, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969) (emphasis added). Indeed, the specification is “the primary basis for construing the claims.” *See Phillips v. AWH Corp.*, No. 03-1269, -1286, at 13-16 (Fed. Cir. July 12, 2005) (*en banc*). One should rely heavily on the written description for guidance as to the meaning of the claims. *See id.*

In addition, for a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under section 102, a single reference must teach each and every limitation of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Accordingly, the Appellants need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter.

Legal Deficiency

The Examiner, contrary to legal precedent (e.g., the *Phillips* and *Cortright* cases discussed above), has failed to construct the claims consistent with the specification and as one of ordinary skill in the art would. Instead, the Examiner has improperly assumed a position in contrast with the plain language of the claims. In particular, independent claims 1, 11, 20, and 24-27 recite, in generally similar language, processing a first group of pixels in accordance with at least a first operation, processing a second group of pixels in accordance with at least a second operation, and processing a third group of pixels in accordance with the at least first and second

operations. This is further clarified by reference to the present application where it is explained that two distinct operations are contemplated and are performed exclusive of one another on at least two of the groups of pixels, then both of the operations are performed on a third group of pixels. *See, e.g.*, Application, page 10, lines 13-19, Fig. 3.

In spite of the apparent sufficiency of the claim language and of the discussion in the specification, the Examiner has taken the position that the recited first and second operations can be the same operation. Advisory action, page 2. However, such a position is incompatible with plain language of the claims, in particular, the recitations that at least the first and second operations are performed on the third group of pixels. This language would be superfluous if the first and second operations could be identical, as posited by the Examiner. Therefore, the interpretation asserted by the Examiner is unreasonable at least in view of the plain language of the pending independent claims.

Independent Claims 1, 11, 20, and 24-27

As stated above, independent claims 1, 11, 20, and 24-27, each generally recite that two distinct processes are performed exclusively on two groups of pixels and that both processes are performed on a third group of pixels. The Fan reference appears to disclose performing the same operation on all input pixel values, i.e., applying contrast-weighted low pass and notch filters to each pixel. *See* Fan page 2, para. 20-24. In other words, the Fan reference appears to disclose a method that performs one process (the weighted application of low pass and notch filters) on all pixels – not a method that has distinct operations performed exclusively on at least two of three groups of pixels.

However, the Examiner proposes that the assignment of a weighting value of one or zero to areas of low contrast or high contrast, respectively, to Equation 1 in Fan results in only one operation being performed on either low or high contrast pixels. Advisory Action, page 2. In particular, the Examiner's position appears to be that the application of a weighted variable of zero to one or both operations, the low pass filter and the high pass filter of Equation 1, results in a zero filter value for the respective operation when the weighted variable is equal to zero. *See* Fan, par. 20-25.

However, it appears clear that the technique of the Fan reference still applies one process (i.e., the application of both low pass and notch filters) to all pixels even in the Examiner's construction. In the Examiner's extreme scenario, the local contrast weighting results in a low-pass filter value of zero in certain cases and a notch filter value of zero in other cases. However, there is no indication in Fan that in these extreme scenarios both filtering operations are not applied, just that the result of certain filtering operations is zero. This understanding is supported by the Fan reference itself which clearly states that the weighting variable may range anywhere from zero to one. *See* Fan, par. 20. Clearly zero weightings would not be needed or contemplated if the filters weren't applied in such extreme scenarios. In view of these deficiencies of the Fan reference, Appellants respectfully assert that each and every element of independent claims 1, 11, 20, and 24-27 is not disclosed in the Fan reference. Furthermore, those claims depending from independent claims 1, 11, 20, and 24-27 are believed to be allowable at least for their dependence from their respective independent claims.

Independent Claims 1, 24, and 26

Independent claims 1, 24, and 26 each generally recite identifying three separate groups of pixels based on whether the pixel exhibits a first characteristic, a second characteristic, or both the first and second characteristics. The Fan reference, however, does not appear to disclose identifying three distinct groups of pixels based on whether the pixel exhibits a first characteristic, a second characteristic, or both the first and second characteristics. Instead, the Fan reference only appears to disclose a method used to process all pixels in a half tone image, assigning a contrast variable to each pixel based on where it falls in a range of contrasts. *See* Fan, page 2, par. 26. Further, the Fan reference appears to disclose that the value of the local contrast variable corresponds to high contrast, low contrast, or contrast anywhere in between. *Id.*

However, The Examiner stated that, “[T]he applicant does the exact same thing as Fan.” Advisory Action, page 2. The Examiner stated that a moderate contrast level is present when a pixel exhibits both high and low contrast, i.e., what the Examiner equates with the first and second characteristics. Final Office Action, page 5. However, the Fan reference appears to assign a local contrast variable to all pixels, where the variable may correspond to high, low, or moderate contrast, and then processes all pixel values together using Equation 1. *See* Fan, p. 2, par. 26. Applicant’s respectfully assert that one of ordinary skill in the art would not read the Fan reference and believe that the disclosure of pixels having moderate local contrast to be equivalent to pixels exhibiting both high and low contrast, as the Examiner’s rationale would appear to require. The Fan reference simply does not appear to disclose identifying three groups of pixels based on first and second characteristics. In contrast, independent claims 1, 24, and 26 disclose in generally similar language identifying a first group of pixels exhibiting a first characteristic, a second group of pixels exhibiting a second characteristic, and a third group of pixels exhibiting both the first and second characteristic. In view of these deficiencies among others, the cited reference cannot anticipate independent claim 1, 24, and 26 or their dependent claims.

Conclusion

For all of the above reasons, Appellants respectfully request that the Panel instruct the Examiner to withdraw the outstanding rejections and allow the pending claims.

Respectfully submitted,

Date: November 20, 2007

A handwritten signature in black ink, appearing to read "John M. Rariden", is written over a horizontal line.

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